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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,669	09/03/2003	Kirsty Spalding	21882-513 UTIL	5366

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EXAMINER

BERTAGNA, ANGELA MARIE

ART UNIT	PAPER NUMBER
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1637

DATE MAILED: 10/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action  
Before the Filing of an Appeal Brief**

Application No.

10/654,669

Applicant(s)

SPALDING ET AL.

Examiner

Angela Bertagna

Art Unit

1637

**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 21 September 2006 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires \_\_\_\_\_ months from the mailing date of the final rejection.  
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because  
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☒ Applicant's reply has overcome the following rejection(s): See Continuation Sheet.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 17,21-23,32 and 33.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☒ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_.  
13. ☐ Other: \_\_\_\_\_.

JEFFREY FREDMAN  
PRIMARY EXAMINER

10/5/06

Angela Bertagna  
Examiner, Art Unit 1637  
October 4, 2006

For purposes of appeal, the proposed amendment(s) will be entered and the proposed rejection(s) detailed below will be included in the Examiner's Answer. To be complete, such rejection(s) must be addressed in any brief on appeal.

Upon entry of the amendment(s) for purposes of appeal:

Claim(s) 17, 21-23, 32, and 33 would be rejected for the reasons set forth in the rejection under 35 USC 103(a) (Wild in view of Hedges) of the final Office action mailed June 6, 2006. As discussed previously, Wild teaches the use of bomb pulse  $^{14}\text{C}$  calibration charts for forensic and archaeological purposes. Although the forensic methods taught by Wild are concerned with "time of death", the archaeological methods taught by both Wild and Hedges are concerned with determining the age or "birth date" of an animal. The methods of Wild were accurate to within 5 years of the actual birth date (see Tables 1 and 2 of Wild). Wild differs from the instant invention in that tooth enamel was not used as the sample. Hedges teaches the use of tooth enamel as a means for determining the age (i.e. the birth date) of archaeological samples. Hedges taught that tooth enamel was useful for age determination since it was more stable than bone and available in the absence of soft tissues or collagen. As discussed previously, an ordinary practitioner of the Wild method would have been motivated to use the tooth enamel for age determination in order to obtain a more stable sample than those obtained from bone and also when other carbon sources were unavailable.

Continuation of 5. Applicant's reply has overcome the following rejection(s): 112, 1st paragraph and 112, 2nd paragraph rejections of claims 17, 21-23, 32, and 33.

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments regarding the 35 USC 103 rejection of claims 17, 21-23, 32, and 33 (Wild in view of Hedges) have been carefully considered, but were not found to be persuasive. Applicant argues that there is no motivation to combine the references, that a reasonable expectation of success in combining the methods does not exist, and that combination of the references does not lead to the claimed invention (page 5 of the response). Regarding the question of motivation to combine the references, Hedges expressly taught that tooth enamel was a more stable carbon source than bone and therefore likely to provide a better age estimate (page 285). An ordinary practitioner would have been motivated to substitute tooth enamel for the bone samples taught by Wild in order to improve the accuracy of the age determinations in Table 1. It is also noted that Wild taught both forensic ("time of death") analysis and age determination ("birth date") applications (compare Tables 1 and 2 of Wild). Regarding the issue of a reasonable expectation of success, the question is not whether the different carbon sources can be prepared in the same way, but rather, if either sample can be used for age analysis by AMS. Since both samples can be used in  $^{14}\text{C}$  dating applications (both sample preparation methods result in  $\text{CO}_2$ , which is subsequently reduced to elemental carbon), this argument was not found persuasive. Finally, regarding the last point, the combination of Wild and Hedges addresses all of the limitations of claims 17, 21-23, 32, and 33. As discussed previously, although the methods of Hedges were not accurate to within 5 years, the methods of Wild, using "bomb peak" correction values were accurate to within 5 years (see Tables 1 and 2 of Wild). Therefore, these arguments are not sufficient to overcome the previously made rejections.